UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Natural Gas Price Formation | Docket No. AD03-7-001

STAFF PAPER ON PRICE FORMATION ISSUES

(June 13, 2003)

On May 29, 2003, the Commission issued a "Notice of Staff Technical Conference & Workshop on Energy Price Discovery & Indices" on issues surrounding price formation and price indices for natural gas and electricity. The conference and workshop will be held, in conjunction with the staff and commissioners from the Commodity Futures Trading Commission and the National Association of Regulatory Utility Commissioners, at FERC headquarters on June 24, 2003.

Introduction and problem definition

A crisis of confidence over the reliability of energy price indices and the uncertainty over industry expectations and government regulatory guidelines now inhibits the progress of energy markets. Reports of past attempts at index manipulation and unreliable or non-transparent statistical methods undercut markets that depend on indices.[1] Recently, there have also been concerns about a lack of information about price liquidity, such that market participants base decisions on misperceptions about how many actual transactions were used to set the price. Since index dependencies permeate the energy industry, accurate price discovery must exist for markets to function properly and efficiently.

There are also concerns about changes in the amount of trading, both generally and with certain types of contracts. Gas commodity markets have shifted from primary reliance on a prompt month (bid week) spot market and longer term forward markets to include active next day and balance-of-month markets. Next-day trading appears to be robust, with a majority of next-day trades being executed on electronic exchange platforms. Transactions in the month-ahead market, however, have declined significantly

[1] In 2002 the Western Markets Task Force investigated the role natural gas indices played in the prices charged for electricity in California. The Final Report on Price Manipulation in Western Markets, issued March 2003 in Docket No. PA02-2-000, determined that employees of several companies had reported false information to publishers of price indices in an effort to skew indices in favor of their trading activities positions (short or long) taken in both the physical and financial markets. In addition, the investigation found that other companies had no system in place to ensure the accuracy of the data being reported to the index publishers.

in the wake of a collapse in the marketing segment of the gas industry. Monthly indices, however, apparently remain important reference points for indexed contracts, settlements for swaps, settlements for pipeline imbalances, etc. We are interested in exploring the vitality of trading in the month-ahead market and the role it plays in price formation under current conditions.

Another concern is the degree of reliance on index-based contracts as opposed to fixed-price contracts. It appears that natural gas producers often sell "at index" and that many local distribution company purchasers buy at index-linked prices in lieu of negotiating fixed prices. Some have alleged that there is over-reliance on index pricing and that it is due to perceptions of what state commissions will consider to be prudent components of a procurement portfolio. Without enough fixed price transactions, there is a real concern that prices will not reflect market conditions.[2] This is another aspect of liquidity concerns—improvements in price reporting, data quality, index methodologies, reporting procedures, and the like still will not produce the desired result if there are not enough fixed price trades to form prices.

On April 24, 2003, Commission staff, with staff from the CFTC, held a technical conference to explore how improvements in price indices could promote confidence in natural gas markets. The conference provided us and participants with useful insights on price indices and their role in price formation, and staff appreciates the contributions of the conference participants. Many issues raised at the April 24 conference affect energy markets generally. Recognizing this, the Commission has expanded the scope of the upcoming conference to consider the role of price indices in the formation of prices for electricity as well as natural gas.

The June 24 conference and workshop will consider both near-term improvements and long-term solutions to the current price formation process. To assist the industry in reaching consensus where possible, FERC staff outlines below possible criteria for price indices and questions which must be resolved in order to achieve a consensus solution and resolve the uncertainty. The criteria address both implementation issues and characteristics of good price reporting systems. We encourage parties to comment on these criteria and questions in written comments prior to the June 24 conference, and we encourage conference participants to address these issues in their remarks at the conference.

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[2] Natural Gas Intelligence (NGI) recently issued an open letter to the Commission and a "Statement on Natural Gas Price Surveys" in which it noted the collapse in fixed price trading and the increased use of indices during volatile periods. NGI urged "buyers and sellers to do less indexing … and more fixed price trading, particularly in the monthly baseload market." *See* www.intelligencepress.com/features/ngi_statement.html.

Implementation criteria

1. Near-term and long-term effectiveness. Near-term improvements are needed to bolster confidence in current price indices. Staff encourages consensus among market participants on steps needed immediately to improve price reporting, the process of calculating and publishing indices, and the information needed for the market to gauge liquidity.

2. Cost considerations. The current system provides the service to the industry at moderate cost as part of the index providers' businesses. Any changes to the current system or any new approach to price formation that significantly upgrade the process for receiving and processing trade data will carry with it a need to fund the improvements or the new structure. Parties should address the problem of increased costs and the mechanism for funding changes in the current system.

3. Applicability to electricity as well as gas. Price discovery is as important for the electric industry as it is for the natural gas industry. Spot and longer-term forward markets exist for electricity. The spot market for electricity has taken two forms. One is the day-ahead and real-time markets administered by FERC-sanctioned RTOs and ISOs. The other is bilateral markets consisting of private transactions between market participants.[3] Published indices report these transactions, in which many of the same problems and concerns have been raised. We request comment on the extent to which the solutions previously discussed in the context of gas indices apply equally for reporting of electricity indices.

4. Implementation. The Commission has jurisdiction over natural gas sale-for-resale transactions that are not "first sales," transportation by natural gas pipelines, and wholesale power transactions by public utilities. Also, sales for resale of Canadian gas are exempt from our jurisdiction. We request comment on the steps the Commission could take within its existing authorities, or with reasonably achievable legislative changes, to implement changes. For example, should the Commission condition the grant of market-based rate authority or the use of interstate transportation facilities (gas and electric) on the users' agreements to provide accurate and complete price reporting? Would such requirements be sufficient to assure that indices are representative of the

[3] The RTO/ISO markets are reliable and transparent. Many bilateral transactions are settled against prices set by the RTO/ISO markets. The newly reactivated NYMEX-PJM West futures contract also uses the daily real time PJM prices for settlement at the end of the contract month. Outside of the organized ISO/RTO markets, the bilateral markets rely on published indices (such as Megawatt Daily's Mass Hub, PJM West, NY Zone-G, Into Cinergy, Into Entergy, etc.) for settlements.

market? Would such requirements guarantee a sufficient number of reported trades to resolve the concern over determining the actual liquidity at various trading hubs and/or the concern that price indices accurately reflect actual market activity? Are there steps the Commission could take to encourage all segments of the market to participate in active negotiation of prices in daily and monthly markets to ensure a statistically significant base of price information upon which to calculate indices?

5. Providing regulatory certainty. Some market participants have suspended reporting trade data, partly out of concern over the present uncertainty in price index development. Such participants may be concerned that their reporting practices or errors in information reported could lead to accusations of providing inaccurate or incomplete data. One means of addressing this perceived risk would be adopting standard practices for reporting trade data. We recognize the need to provide as much regulatory certainty as possible for good faith reporting of trade data, while still enabling the Commission to take action against false reporting or attempted manipulation of price indices. We encourage industry consensus on reporting standards to facilitate regulatory certainty.

Price index criteria

Comments at the April 24 conference show that the industry is working on criteria for various aspects of reporting and processing trade data and producing better price indices. One group, the Committee of Chief Risk Officers, issued a White Paper proposing "Best Practices for Energy Price Indices." Those practices address desirable attributes for several aspects of determining price indices.[4] We request comment on the following criteria for developing price indices.

1. Confidential. An index developer should provide confidentiality agreements to assure entities that commercially sensitive individual transaction data submitted will be held in confidence except to the extent necessary to verify the index and allow for any regulatory oversight

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2. Complete. Price reporting systems should maximize the amount of useful and appropriate information they collect and disseminate. Complete information would include actual transaction variables such as price, volume, delivery point, duration, date

[4] The recommended best practices include reporting full transaction-by-transaction data; publication by the index developer of the methodologies used, including definitions of sample size, treatment of double-counting and outliers, and method for determining a value when there is insufficient data; an error resolution process; strong confidentiality agreements; and periodic process audits for data suppliers and index developers. *See* www.ccro.org/bestprac.html.

and time, whether the transaction is a purchase or sale, and the counterparties to the transaction. Useful information to disseminate includes price, volume, location, type of contract, time, and liquidity. In particular, there should be some measure that informs customers how many actual transactions led to an index price.[5]

3. Transparent. Customers of price reports should be able to know how the information was developed. They should know about index calculation methodologies including relevant formulas and algorithms, treatment of aberrant data, and use of judgments, assessments, or similar subjective adjustments.

4. Verifiable. Customers of indices should have faith that the information they rely upon has been verified by a sufficiently thorough and independent audit process. Quality control measures, including a verification and error resolution process that includes buy-sell matching, should apply to the data. An index developer should: provide adequate security for collected data, including a backup system; have the ability to process large quantities of data quickly and accurately; and possess sufficient market knowledge and statistical expertise to recognize errors in reported data.

5. Accessible. All interested customers should have reasonable access to price reports on a timely basis.

Questions

We seek responses to key questions in order to achieve an appropriate solution:

1. Should the Commission have access to the data? Under the current regime of trade publication indices, the Commission and the CFTC have limited ability to investigate allegations of manipulation. Can this regime achieve the goals of verifiability and transparency? Are there near- or long-term changes that could be made to achieve sufficient verifiability and transparency other than allowing for regulatory review?

2. Should the Commission mandate reporting? The volume of transactions reported has declined, as companies have suspended reporting due to uncertainty over reporting standards or to review their procedures and safeguards for reporting accurate

[5] We encourage the development of liquidity measures that classify trading points by liquidity and provide specific information about the number of trades or indicate graduated levels of activity.

information.[6] Developers of price indices have expressed concern that withholding trade information from the market undermines the index process.[7] The reluctance of some companies to report trade information voluntarily raises the question of whether trade reporting should be mandatory. Due to antitrust laws, the industry acting alone could not implement certain means of requiring report, such as stopping trading with non-reporting companies. In other markets where "self-regulating organizations" (SROs) exist there have been exemptions to such antitrust laws allowing mandatory reporting. Should the Commission require entities holding blanket market-based rate authority to report specified trade information to one or more index developers whose indices meet specified standards, subject to adequate confidentiality protections? How can sufficient completeness be achieved without some form of mandate to report? How could the Commission implement a mandate under current law? Would legislation allowing the Commission to mandate price reporting help?

3. Should reports include counterparties? The verification process effectiveness increases when the index provider has information on whether a transaction was a purchase or sale, with counterparty company name. Some reporting companies have commented that this information is highly sensitive and that they will not report the data to a third party, or that non-disclosure agreements bar reporting such information. Others, including index providers, argue that without counterparty data they cannot confirm reported trades and thus assure accuracy in the data used to construct indices. Staff recognizes the fundamental tension between the need to ensure accurate indices and to protect commercially sensitive information. Is there a way to achieve sufficient verifiability without a buy/sell indicator and counterparty information? If there were a requirement to report counterparty data, what protections could the Commission or an index developer provide for commercially sensitive information?

4. Should there be an external audit? There appears to be general consensus that some audit process is necessary to achieve verifiability but less agreement on the nature of the audit process. The highest degree of confidence would result from an external process and data audit by a major independent firm, with the results of the audit (and underlying data) provided to the Commission for review. Some index providers

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6 Recently, for example, Entergy-Koch Trading announced that it has suspended all price reporting "until there is further clarity and certainty around industry expectations and the government regulation guidelines."

7 For example, in NGI's "Statement on Natural Gas Price Surveys," NGI urged "companies which have not reported prices in the past or who have let their price reporting lapse to make contributions to our surveys in the interests of a robust market measure." See www.intelligencepress.com/features/ngi_statement.html

argue that review of the information by anyone outside their company would raise liability and impose costs. However, an audit process that only addresses process or that is only internal would provide less transparency and confidence. Staff views auditing and reporting to the Commission as central to restoring confidence in price indices. Parties should comment on the type of audits and reports best suited to achieving verifiability.

5. Should the Commission authorize price reporting entities? How can the Commission implement standards of review, reporting, confidentiality and auditing? Are there minimum standards that the Commission could apply to price reporting entities? How can companies providing transaction data have assurance that they are providing data to bona fide price reporting entities?

6. Should the Commission delegate any regulatory functions to an SRO? If so, which one? Depending on the scope of regulatory functions deemed appropriate to oversee price discovery mechanisms, the Commission could delegate many such functions to an SRO. These include standards of conduct, compliance, surveillance, auditing, enforcement, rulemaking, standardization of formats, dispute resolution, adjudication, and membership requirements.

SROs are well-established in certain financial industries, often operating under supervision from agencies that have been granted specific legislative authority.[8] We request comment on the steps that would be necessary for the Commission to sponsor or validate an SRO-type entity for price formation in the energy industry. SROs also raise significant questions of cost, governance and oversight. If the Commission mandated use of an SRO and/or subjected the SRO to government oversight, would the Commission need additional specific legislative authority to create and regulate such an SRO? If the Commission were given authority or direction to supervise price formation mechanisms, could it delegate some price surveillance to an SRO? We request comment on the extent of the Commission's current powers to accomplish an SRO solution.[9]

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[8] For instance, the National Futures Association registers and monitoring futures brokers under the oversight of the CFTC and pursuant to legislative provisions; GovPX, Inc. is a private company which benchmarks U.S. Treasury market prices without legislative provisions, but with the approval of the U.S. Treasury and Federal Reserve.

[9] Two examples include the InterContinental Exchange (ICE) which suggests that its existing eConfirm system currently operates as a central processing platform hub, and the University of Houston Global Energy Management Institute (UH-GEM) which proposes to develop a new energy price data hub within six months.

Advantages of an SRO are centralizing the process of reporting, processing, and disseminating data under conditions which provide for oversight and auditing, creating a high degree of confidence. Disadvantages include the time to select or create the SRO, potential need for legislative authority, and potential disruption in the transition from existing indices to new indices resulting from SRO data or published by the SRO, and the potential for significant costs.

Written comments

We encourage interested parties to submit written comments on the issues discussed above in advance of the June 24 conference and workshop. We request that comments be filed by June 20, 2003. Instructions on filing electronically can be found at http://www.ferc.gov/documents/makeanelectronicfiling/doorbell.htm.